

## REMARKS

Claim 29 has been amended to clarify that Applicants' fuel cell system comprises a fuel reformer that generates a feed stock comprising hydrogen and carbon monoxide, and that the feed stock is treated by the CO-selective oxidation reactor, as shown in Fig. 5 and described in paragraph 0039. The claim is also amended to more particularly point out that Applicants' preferred modifying agent is lead or a compound thereof, as taught throughout the specification and set forth in original claim 3.

Newly added claims 36-46 correspond to claims 2 and 4-11, now cancelled, rewritten to be dependent upon claim 29, and recite additional features preferred for the CO-selective catalyst in Applicants' fuel cell system.

Following the cancellation of claims herein, the application contains 1 independent claim and 12 total claims. No fee is calculated to be due for the additional claims. In the event that a fee is deemed to be due, authorization for payment is set forth in the final paragraph of this Amendment.

The amendments merely seek to rewrite prior claims to be dependent upon the sole remaining independent claim. Moreover, the amendment to the sole independent claim merely clarifies the claim and focuses the scope to a lead modifying agent. Thus, the amendments do not add new matter or raise new issues. In the event that the amendments are not deemed to place the claims in condition for allowance, it is nevertheless requested that the amendments be entered, if for no other reason than to reduce the number of claims and clarify issues for purposes of appeal.

*Claim Rejection under 35 USC § 103*

Claim 29 stands rejected under 35 U.S.C. § 103 as unpatentable over United States Patent No. 6,299,995, issued to Abdo et al. in 2001.

Applicants have discovered that the addition of lead to a platinum catalyst renders the catalyst more selective for the oxidation of CO relative to H<sub>2</sub>, see Figs. 1 and 2, and paragraphs 0033-0035. See also, Example 2, beginning at paragraph 46. Nothing in the art teaches or even remotely suggests these remarkable results. Applicants have applied their discovery to make a fuel cell system to enhance the feed stock from the fuel reformer and thereby improve operation of the fuel cell. The art does not show their improved fuel cell system, and Applicants are entitled to a patent thereon.

The rejection of claim 29 is based upon Abdo et al. Abdo et al. shows a process for treating a fuel stream for a fuel cell using ruthenium, col. 4, lines 30-33. The rejection points to a passage at col. 9, lines 25-35, as showing modifiers added to the catalyst. Despite a long list of allegedly well-known modifiers, lead is not mentioned. Moreover, while it may be desirable to improve catalyst activity, selectivity or stability, as stated at col. 9, line 27-28, there is no teaching as to which modifier might affect which property, or the amount that might be effective. Thus, when fairly read, Abdo et al. does not point the practitioner, aware of the unpredictability of catalytic reactions, to add 2 to 25% lead to platinum or other catalyst metal to improve selectivity for CO

reactions, so as to arrive at Applicants' fuel cell system.

Claim 29 is directed to Applicants' fuel cell system that includes a CO-selective oxidation catalyst that includes Pt, Pd, Rh, Ir, Os, Ru, Ta, Zr, Y, Ce, Ni, or Cu catalyst material, and Pb modifying agent. Abdo et al. does not include Pb in the long list of recited modifiers, or suggest the effect, or effectiveness, of lead added to catalytic metal. Still further, in accordance with the claim, either as previously presented or as amended herein, the amount of lead is about 2 to about 25 atomic percent. There is nothing in Abdo et al. guesses at effective amounts of the recited modifiers, let alone lead modifier. Thus, Abdo et al. does not lead the practitioner to add an effective amount of lead for enhanced CO selectivity, and, without this, does not suggest Applicants' fuel cell system in claim 29.

Claims 36-46 are dependent upon claim 29 and so not suggested by Abdo et al. for the reasons set forth with regard to that claims. Moreover, the dependent claims recite additional features preferred in the practice of Applicants' invention, and not taught or suggested by Abdo et al. More particularly, Abdo et al. discloses ruthenium, as opposed to Applicants' preferred catalyst metals set forth in claim 36. Attention is also directed to preferred ranges of modifying agent in claims 37 and 42-44, not found in Abdo et al.

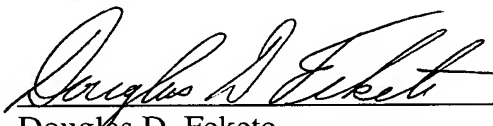
For these reasons, it is respectfully requested that the rejection of claim 29 based upon Abdo et al. be reconsidered and withdrawn, and that the claim be allowed, along with newly added dependent claims 36-46.

*Conclusion*

It is believed, in view of the amendments and remarks herein, that all grounds of rejection of the claims have been addressed and overcome, and that all claims are in condition for allowance. If it would further prosecution of the application, the Examiner is urged to contact the undersigned at the phone number provided.

The Commissioner is hereby authorized to charge any fees associated with this communication to Deposit Account No. 50-0831.

Respectfully submitted,

A handwritten signature in cursive script, reading "Douglas D. Fekete", written over a horizontal line.

Douglas D. Fekete

Reg. No. 29,065

Delphi Technologies, Inc.

Legal Staff – M/C 480-410-202

P.O. Box 5052

Troy, Michigan 48007-5052

(248) 813-1210